



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,278	03/16/2001	Kazuki Sato	108964	4975

25944 7590 05/28/2003

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
----------	--------------

3729

DATE MAILED: 05/28/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/809,278

Applicant(s)

SATO ET AL.

Examiner

A. Dexter Tugbang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 13-16 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-12, 17-23 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. The applicants' amendment filed 2/24/03 (Paper No. 12) has been fully considered and made of record.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. This application contains Claims 1-5, 13-16 and 24 drawn to an invention nonelected with traverse in Paper No. 8. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 102

4. Claims 6, 7, 9-12, 17, 18, 20-23 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang et al 5,271,802.

Regarding Claims 6 and 17, Chang discloses a method of manufacturing a magnetoresistive device substructure comprising: forming a magnetoresistive element (head element 20 on the far left in Fig. 1) and an indicator (anyone of the head elements 20 not on the far left in Fig. 20) having a shape similar to the magnetoresistive element located in a specific position spaced from the magnetoresistive element; and forming a soft magnetic layer in a specific position by aligning with the position of the indicator (see col. 3, lines 18-20).

Regarding Claims 7 and 18, the claimed "indicator", which is read as anyone of the head elements 20 (in Fig. 1) not on the far left, can be said to be "dummy element" such that during manufacture of the indicator, the indicator does not function as a magnetoresistive element since the magnetoresistive element is not in operation in a recording medium.

Regarding Claims 9-11 and 20-22, Chang further teaches forming an overcoat layer 26 covering the soft magnetic layer 20, forming at least one opening in the overcoat layer (shown in Fig. 4C) by reactive ion etching (see col. 6, lines 14+), and forming a film 24 capable of stopping reactive ion etching on the indicator 20 prior to forming the overcoat layer 26.

Regarding Claims 12 and 23, Chang further teaches that indicator 20 is divided to fabricate more than one magnetoresistive device (see col. 4, lines 19-20).

Regarding Claim 25, the claimed "first patterned thin film" is read as the head element 20 on the far left in Fig. 1.

Claim Rejections - 35 USC § 103

5. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al in view of Simon et al 3,787,964.

Chang, as relied upon above, teaches the claimed manufacturing method including forming multiple magnetic layers in which at least one magnetic layer can be read as a soft magnetic layer and another magnetic layer can be read as a dummy layer (discussed at col. 3, lines 15-20). However, Chang does not mention that the soft magnetic layer and dummy magnetic layer can be formed at the same time.

Art Unit: 3729

Simon teaches that multiple magnetic layers can be formed simultaneously through deposition to produce a vast quantity of magnetic heads (see col. 5, lines 6-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the soft magnetic and dummy layers of Chang at the same time, as taught by Simon, to positively manufacture a vast quantity of magnetic heads.

Response to Arguments

6. Applicant's arguments filed 3/24/03 have been fully considered but have not been deemed to found as persuasive.

In regards to the merits of Chang, the applicants contend that Chang does not teach forming the soft magnetic layer in a specific position by aligning with the position of the indicator.

Upon further review of Chang, the examiner most respectfully disagrees. The soft magnetic layer of Chang (at col. 3, lines 18+) is formed in alignment with the position indicator (anyone of the head elements 20 not on the far left in Fig. 20) to the extent that completion of the magnetic head alone would have the position indicator and soft magnetic layer in a specific position of alignment resulting in the final product. It is noted that further limitations are needed as to how the position indicator and soft magnetic layer are aligned in order to avoid Chang.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

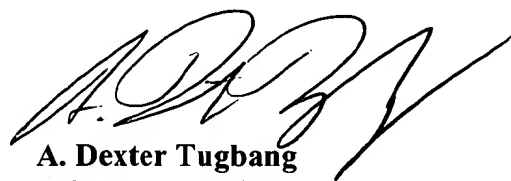
Art Unit: 3729

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dexter Tugbang whose telephone number is 703-308-7599. The examiner can normally be reached on Monday - Friday 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3590 for regular communications and 703-305-3588 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.



A. Dexter Tugbang
Primary Examiner
Art Unit 3729

adt
May 23, 2003